



Figure S4. Persistent antigen exposure resulting from impaired T cell cytotoxicity machinery results in progressive CART19 dysfunction.

(A-B) WT, TRAILKO or PRF1KO CART19 cells were combined with WT Nalm6 and (A) Nalm6 survival and (B) CART19 expansion was measured over time.

(C) Schematic of functional evaluation studies, in which CART19 cells were sorted after short-term (5 day) or long-term (15 day) initial cultures with WT Nalm6, and then re-exposed to WT Nalm6.

(D-E) Measurement of effector cytokine secretion after 48h of secondary culture following (D) short-term or (E) long-term initial culture.

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, **** $P < 0.0001$, ns: not significant